A PRACTICAL RATIONAL ALPHABET.

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How to reform English orthography, and reduce it to simple regularity is an interesting problem. Repeated efforts have been persistently made in that direction. Among others, overhasty enthusiasts, in their disgust at the irregularities and phonetic inadequacies of the established English spelling, have insisted that a comparatively few of the most glaring irregularities should be "simplified" at once, hoping that later on another larger batch of "corrections" may be adopted. Of course, such alterations from the established usage can only come gradually into general, or established, use; not in less than fifty or seventy years, as may be seen in the few small changes urged by Noah Webster. Meanwhile, if the alterations meet with somewhat wide acceptance, there must be, on the whole, very greatly increased irregularity in English spelling, approaching, indeed, chaotic lawlessness. The repetition, and thereby prolongation of this painful unruly condition of our orthography in such an ill-considered effort at reform must remind one of the pretended humanity of cutting off a dog's tail by stages of an inch at a time. Would it not be far better to devise a practical and thoroughgoing system of orthography to be used alongside of the present established usage; and to become more and more used, until at last, it may become altogether adopted and universally used?

There are serious difficulties, however, in setting up a practical and thoroughgoing system of orthography. Any plan of reformed orthography should never fail to keep in mind the necessity of being thoroughly practical, if the least hope be entertained of its coming into universal, or even common, use. The great, widespread vogue of the Roman alphabet is doubtless due to its even rude simplicity; and in many hundred years it has been impossible to introduce into general use more than a very few extremely simple modifications of

the original forms of the letters: as for instance the carvilium to distinguish G from C and the distinction between J and I and between U and V, which appear to be still struggling for complete prevalence. It may, however, be borne in mind that notable additions to the Arabic alphabet have been made and accepted in order to express additional sounds in Persian or other languages: but it is noticeable that such added forms are strictly in keeping with the original character of the alphabet. The Russians have also strongly modified the Roman alphabet, and not always quite in keeping with the rude simplicity of its general character; yet have established its use throughout a great empire. In proposing new forms of letters for newly distinguished sounds, it is certainly advisable to maintain some restraint upon one's fancy, to adhere to the utmost simplicity, and to depart as little as possible from the general character of bare simplicity of the Roman alphabet, making use, so far as possible, of old devices, and putting forward as few novelties as possible, to be learned and made familiar. It seems highly desirable to avoid the use of altogether outlandish forms like the fully obsolete old Anglo-Saxon letters, wholly out of keeping with our modern alphabet; or to offend the eye by intermixing italic letters with Roman and by other tasteless similar devices, or by interspersing inverted letters, though to be sure of good Roman shape. Above all, however, let us avoid separate diacritical marks to distinguish sounds, marks that are a nuisance to write, an obscurity to read, and by their occasional forgetful omission a fruitful source of misleading. Especially the use of diacritical marks in a way opposed to their time-honored significance, is to be reprehended; as for example, the use of an accent to indicate merely the length of a vowel. Such practice has misled commonly into various errors of pronunciation of some oriental words. We shall see if there be any serious difficulty in getting handsomely along without any of those hastily, inconsiderately adopted, tempting, shallow, easy, but terrible, makeshifts. There are some restraints, or guides, which must cogently influence our choice of letters or symbols to be used in indicating the different sounds of the language. It is highly desirable, or absolutely necessary, that each sound should be indicated by only one letter, and that each letter should have but one sound; and it would

be absurd to acknowledge that principle, and then as in Volapuek and Esperanto, at the very outset give to *z* the sound of two letters, *ts,* merely because it happens to have those sounds in German. Another important principle is to give to letters or devices the force that they already have, and long have had, in the languages where they have been in use. In general, the customary practice of the majority should have sway, requiring the minimum of new learning. As English is far and away the most numerously spoken language throughout the world, the sounds to be attributed to the consonant letters should be as in English; though, owing to the extreme irregularity and variety of the English vowel letters, they must give place to letters that are more prevalent in the other European languages. The English consonant *y,* for example, should be used; not, as in Esperanto, the letter *j,* which has that sound among the comparatively small number who use German and Italian. In Volapuek, *j* is made to serve for the English *sh,* a most unheard-of use.

In English, the combinations *ch, sh, th* and *wh* each is used for a single sound, and it is desirable to substitute for it a single letter. Would it not be highly practical to write those sounds by means, in each case, of merely the first of the two letters with a subscript small appendage somewhat similar to the old device of the French cedilla, though a little different in form, to represent the letter *h,* and having a more or less distant resemblance to it in shape? In cursive writing, the resemblance to an *h* need not by any means be close, and may be really abbreviated, as there would be no danger of misunderstanding. We have, thereby, four new characters with but a single device to remember, and that not a new one, and the new forms are entirely in keeping with our old alphabet and with already customary methods. As to the sound of *ch* in *church,* it is sometimes maintained that it is in reality a sound compounded of *t* followed by *sh.* But that is clearly an error; for even the ear can distinguish a difference in the sounds, and the sound of *ch* is as distinctly different as is the sound of the opening or closing of a somewhat tightly swollen door, compared to the mild clapping to of a well-fitting closure. The peculiarity of the contact of the tongue and roof of the mouth, with the consequent vibrations of the roof of the mouth, occasions a peculiar sound different from *t* and from

sh. A corresponding difference occurs between the sound of a smack with the lips and *p* or *b*. The sound of *zh*, as in pleasure, would, of course, be indicated by *z* with a subscript *h*. If it be desired (unlike ordinary English) to distinguish the sound of *th* in *this* from that in *thin*, the logically analogous and simple mode of writing it would be with a *d* with a subscript *h*. The whispered, or surd, *y*, heard in the word *hue*, might also be indicated by a *y* with a subscript *h*. The guttural sounds indicated in oriental transliteration by *kh* and *gh*, would likewise be represented by *k* or *g* with a subscript *h*. Until types of these new forms are to be had, we may provisionally, instead of the subscript *h*, use a small *h* at the side: c_h, s_h, t_h, d_h, k_h, g_h, w_h, y_h. The simple sound written in English with *ng* should be indicated (as proposed so long ago as Benjamin Franklin) by a character similar to a *g* but with the upper part in the form of an *n*, for which there is already type.

Other consonant sounds, the so-called cerebral sounds, occurring, for example, in the Sanscrit and in the dialect of Peking, could be simply indicated in a similar manner, by giving to the upper part of the corresponding letter the shape of an *r*; since those sounds are made with the tongue rolled up, as for an *r*. In Sanscrit, such a modification of *sh* occurs and in the Peking dialect *y* is so pronounced, with the tongue rolled up, and may be indicated by a *y* with the upper right hand fork in the shape of an *r* (provisionally s_r, and y^r).

With these four or five simple characters, we have then a full supply of consonants without going outside of the ordinary English usage; *b, c, ch, d, dh, f, g* (always as in *give, get*), *j, k, l, m, n, p, r, s, sh, t, th, v, w, y, z, zh;* omitting *q*, and *x*, as superfluous; and using *c*, only with the subscript *h*. Indeed as the *c* is only so used, even if the subscript *h* should be omitted there would be no danger of confusion, and *c* would have before all vowels the same sound that it has in Italian before *e*, and *i*. *H* is sometimes reckoned as a consonant, but, of course, erroneously, as it is the whispered form of the vowel that follows it.

As already intimated, order out of the chaos of English vowels is only to be attained by adopting the more uniform practice of the European continental countries, with *a*, as in *arm*, *o* as in *note*, *u* as

in *rule, i* as in *pique, e* as in *they;* and, for the vowels, we must abandon the hope of indicating by a separate character every one of the infinite number of shades of sound, a few of which occur in such series of vowels as in: *hate, hale, hare, hairy, Harry, hal, hat.* The progress of enlightenment in thousands of years has led to far greater nicety of distinction in vowel sounds than was common formerly. But instead of five or six vowels that it was then found worth while to indicate by separate characters, it would now be hardly practical to have distinct letters for more than eighteen or twenty vowels and that number may be very practically arranged.

A difficulty in bringing into general use any such somewhat nicely adjusted system of indicating the sounds, especially the vowel sounds, of any language is that the pronunciation of words is different in different regions and even among different families and individuals of the same region; nay, even with the same individual according to varying emphasis in different connections, as *to* in "going to Boston," and "to and fro" and the pronunciation sometimes varies through slackness or slovenliness of articulation or enunciation, as in substituting a slight vowel sound for the consonants *y* and *w* in such words as *they* and *snow,* or in dropping *r* altogether after a vowel and before a consonant, as in *arm.* Hence strict regard to phonetics would give the same word several different forms according to the taste or habits of different writers, and stand seriously in the way of the uniformity of spelling that would be extremely desirable for at least a literary language to be used in common by a numerous people.

As regards the vowels Professor Samuel Porter over forty-eight years ago, in the *American Journal of Science,* September, 1866, excellently classified the readily distinguishable vowel sounds of English and other principal European languages, and arranged them according to their physiological mode of formation, with a simple illustration indicating nine different parts of the mouth where the tongue is placed to give the form of cavity, which with the issuing breath, will produce each vowel sound. So simple are the plan and the illustration that they have been perfectly successful in inducing very ignorant Orientals (in India and China) to indicate thoroughly and simply the mode of formation of some of their most

peculiar sounds, which to ordinary foreigners without Porter's help, and with merely the ear as a guide, are mysterious and even considered quite unattainable. He distinguishes nine points at which the tongue is placed, and at each of those points, four degrees of openness; making thereby thirty-six readily distinguishable vowels. But a number of them are not in ordinary use, and are therefore not to be considered in any orthographic scheme. A few additions are to be made on account of the effect of stiffening the lips, changing the sound. In order to accommodate ourselves to this classification of the vowels it is desirable to add to our letters æ (not a new combination) as ae in German *Maedchen,* for the sound of *a* in *care;* and oe (again not new), nearly like the oe in German *schoen* for certain closely allied sounds; and a new character, like the Swedish *a,* with an *o* over it; but contracted into a single form, for the sounds, like *a* in *war,* or *o* in *lord,* or *oa* in *broad.* Yet another new form may be added, *e* with a stroke like an accent just to its left, to correspond with the French acute-accented *é.* We have, then, nine characters for Porter's nine groups of four vowels each. He calls attention to the fact that in each group of four vowels, differing only in the degree of closeness of the tongue at the same place in the mouth, two of the four are long and two short. Let us therefore represent the long vowels by the ancient device of simply doubling (with slight contraction) the letter used for the short vowels, as the Greeks already set us the example with their omega. All the vowels can in like manner be doubled, and somewhat contracted, making at once eighteen easily written and easily read vowels conforming well to the already established character of our alphabet. Until appropriate type for the purpose are to be had, we might provisionally merely double the present letters; as: aa, ee, etc. In one or two cases the number can be increased by indicating a labial modification of the vowel by means of a small upright stroke, an abbreviated *l* (provisionally a small *l*), close to the right hand of the letter. In this way, we are easily provided with about twenty vowels, apparently an ample supply for the English language.

Let us now consider the vowels one by one, more particularly. In group I, the *a* of *last, ask, chant,* is short; while that of *father*

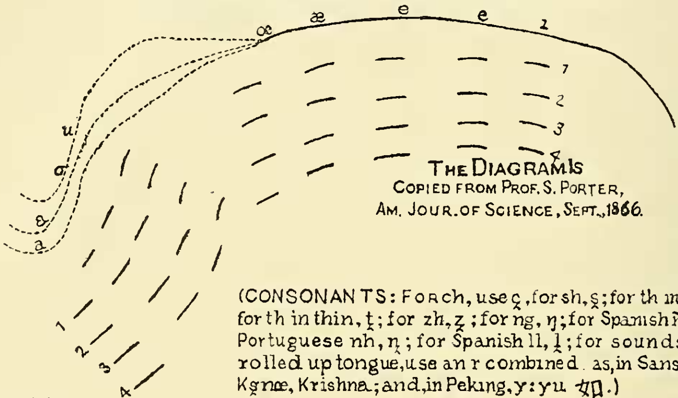
and *calm* is long; and that of *baa, ah, arm, charge* is still broader. The two last would therefore be written with a double letter (provisionally aa); and there would be no need to distinguish in writing between these two, because there is distinction enough in the following *r* or *h*.

In group II, the two closer vowels, as (long) in *war, lord, awe, pause,* or (shorter) *all, water, long, daughter,* are both labially modified, by stiffening the lips; and can be so indicated by means of a small upright stroke (an abbreviated *l,* provisionally a small *l*) just to the right of the letter. The longer vowel can be indicated by doubling, as already described. The shorter and not labially modified vowel of the second degree of openness is heard in the words *salt, although, cross, horror;* and the third degree of openness, also not labially modified, occurs in *sod, nor, off, what, knowledge;* and may be written with an *a* combined with an *o,* like the corresponding Swedish letter, but more contracted. These two closely similar vowel sounds, scarcely distinguishable by ordinary ears, it seems hardly worth while to provide with separate letters (though the distinction of the third degree might be marked by a small 3 just to the right of the letter). The fourth degree of openness does not occur in ordinary speech.

In group III, in like manner, the least open vowel, as in *note, toe, low, loaf, door, mourn,* being longer, may be written with a double letter (like the Greek omega), or, provisionally, by a repetition of the single letter, *oo*; and might be marked as labially modified, in the way already indicated. But this is hardly necessary, because, in English, it always has that modification, making it unnecessary to mark it. The next degree of openness is likewise always labially modified, and being short would be written with a single letter. It is also distinguished by being an unaccented vowel. The third degree of openness, as in *not, dot, folly, knock, proper, bite, eye* (*oy,* a short *o* followed by the consonant *y*) occurs only in accented syllables, and is thereby sufficiently distinguished.

In group IV, the long sound of the vowel in *rule, sure, fool, pool, moon, shoe, soup,* would be written with a double vowel (provisionally by *uu*), while the vowel of the second degree of openness, as in *full, pull, bosom, woman, should, good, foot, book,* would be

DIAGRAM OF THE PALATO-LINGUAL POSITIONS.



THE DIAGRAMS
COPIED FROM PROF. S. PORTER,
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(CONSONANTS: For ch, use ç, for sh, ş; for th in this, ḑ; for th in thin, ţ; for zh, ẓ; for ng, ŋ; for Spanish ñ, and Portuguese nh, ŋ; for Spanish ll, ḽ; for sounds with rolled up tongue, use an r combined. as, in Sanscrit, ş: Kşnœ, Krishna; and, in Peking, y: yu 玉.)

VOWELS·

I A, Æ, a, aa, α, αα, A, Æ
1. as in last, ask, chant: last, ask, çant.
2. as in father, calm: faather, kaam.
3. as in baa, ah, arm, charge: baa, aa, aarm, çaarj
4. (Not in good English.)

II. Ɑ, Ɑ, ɑ, ɑɑ, Ɑ, Ɑ, ɑ, ɑɑ.
1! as in awe, war, lord, pause: ɑɑ, wɑɑr, lɑɑrd, pɑɑz, (labially modified—lips stiff).
2! as in all, water, long, daughter: ɑl, wɑter, lɑng, dɑter, (labial)
2. as in salt, although, cross, horror: salt, alḑo, kras, har œr.
3. as in sod, nor, off, what, knowledge: sad, nar, af, what, nalej.
4. (Not in good English.)

III. O, Ω, o, ω, O, Ω, o, ω.
1! as in note, toe, low, loaf, door, mourn, beau. nωt, tω, lω, lωf, dωr, mωrn, bω.
2! as in opinion, agony, propose, mellow: opinyœn, ægone, propωz, melo (unaccented).
3. as in not, dot, folly, knock, proper, eye, bite: not, dot, fole, nok, propœr, oy. boyt
4. (Not in good English.)

IV. U, Ɯ, u, ɯ, U, Ɯ, u, ɯ
1! as in rule, sure, fool, pool, moon, move, shoe; rɯl, şɯr, fɯl, pɯl, mɯn, mɯv, şɯ.
2! as in full, pull, bosom, woman, should, good: fɯl, pɯl, bɯzœm, wɯmœn, şɯd, gɯd.
3. as in fulfil, willful: fulfil, wilful—(unaccented).
4. (Not in good English.)

V. Œ, Œ, œ, œ, Œ, Œ, œ, œ.
1! (Not in English—the German ö, French eu.)
2. as in girl, virtue, mercy, myrtle, earl: gœrl, vœrtyu, mœrse, mœrtl, œrl—(before r).
3. as in up, but, cousin, rough, dove, done: œp, bœt, kœzin, rœf, dœv, dœn.
4. as in burr, church, work: bœr, çœrç, wœrk—(before r, accented).

VI. Æ, Æ, æ, ææ, Æ, Æ, æ, ææ.
1. as in their, fair, parent: ḑær, fær, pærent.
2. as in care, there, prayer, hair, pair: kær, ḑær, prær, hær, pær—(before r).
3. as in cat, man, sad, hap: kæt, mæn, sæd, hæp—(accented, no r).
4. (Not in good English.)

VII. E, E, e, ee, E, E, e, ee.
1. as in they, grey, vein, great, name, fate: ḑey, grey, veyn, greyt, neym, feyt.
2. as in nitrate, climate: noytret, kloymet—(unaccented).
3. as in get, egg, red, mend: get, eg, red, mend—(accented).
4. (Not in English.)

VIII. 'E, 'e, 'E, 'e.
1. (Not in English—the French é.)
2. as in guinea, valley, carried, city: gi'ne, væl'e, kæred, cit'e—(unaccent'd).
3. as in goodness, college· gud'nes, kalej—(unaccented).
4. (Not in English.)

IX. I, Ɨ, ı, ɨ, I, Ɨ, i, ɨ
1. as in pique, machine, field, eat, eve, deep: pɨk, maşɨn, fɨld, ɨt, ɨv, dɨp.
2. as in divine, vehicle, mandarin: divoyn, vɨhikl, mændarin—(unaccented).
3. as in pin, hit, sin, will: pin, hit, sin, will—(accented).
4. (Not in good English.)—(The French u would be ɨɥ.)

(Until proper type can be had, use double letters for long vowels.) B.S.L.

written with a single letter. Both these vowels are labially modified, and might be so marked, in the way already indicated, but it is unnecessary so to mark them, because there is no vowel in English with which they could be confounded. In the third degree of openness, the unaccented vowels in *fulfill,* and *willful,* occur; but (written with a single letter) are sufficiently distinguished by the absence of accent. The fourth degree of openness does not occur in good English.

In group V, the first and second degrees of openness, occur in the German oe, and the French eu (nearly, though not quite, the same) ; but not in English. The second degree of openness without labial modification occurs in English only before *r* as in *mercy, virtue, girl, myrtle, earl, pearl, earth;* and may be written with a single letter (œ). In the third degree of openness, likewise short, and to be written with a single letter, occurs the so-called natural vowel, accented, and without *r,* as in *up, but.* In the fourth degree (written with a double vowel), long, occurs before *r* the vowel sound of *burr, occur.*

In group VI, the long sound, with a double letter (provisionally, the single letter repeated, æ æ), is heard as the *a* in *parent, ei* in *their, ai* in *fair.* It is the German *ae* in *Maedchen,* and the French *è* in *après, scène, père.* The second degree of openness, with a single letter, is heard in *care, there, prayer, heir, pair;* in each case followed by the sound *r.* Without that sound of *r,* the third degree of openness gives us, with the same letter, the *a* in *at, cat, man, sad, hap.* The absence of the *r* makes it unnecessary for them to distinguish the two slightly different vowels.

In group VII, the first degree of openness with a double letter, or, provisionally, the single letter repeated, *ee,* gives us the *e* in *they, grey,* and the like sounds in *fate, name, great, vein, hail, pay;* the German *mehr, jeder, ledig, See.* The second degree of openness, with a single letter, gives us the *a* of unaccented syllables, as in *nitrate, climate.* The third degree of openness, with the same single letter, occurs in accented syllables, as in *get, egg, red, mend.* The fourth degree does not occur in English.

In group VIII, the first and fourth degree of openness do not occur in English. The first one, to be written with a double letter,

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occurs in the French acute-accented *é* and *ai*. The second degree of openness (written with a single letter, provisionally, ¹e, an *e* with a small upright mark, or figure 1, above at its left) occurs in English in unaccented syllables only, as in *guinea, valley, carried, city*. The third degree of openness (likewise a single letter) differs so slightly from the second as hardly to need a separate character, though it might be marked with a small abbreviated 3 put to the right and upper part of the letter *e*. It occurs in the unaccented syllables *goodness, college*.

In group IX, the first degree of openness, to be marked with a double letter (provisionally, *ii*), is found in the *i* of *pique, machine*. When this is labially modified by stiffening the lips, it becomes the French *u*, as in *ruse*, and the German *ue*, as in *ueber*, to be marked with a small stroke, an abbreviated *l*, at the right of the letter. The second degree of openness, to be marked by a single letter, occurs in unaccented syllables as in *divine, vehicle, mitigate*. The fourth degree of openness does not occur in English.

We have, then, for the vowels nineteen letters; distinguishing all the readily distinguishable vowels used in English. In two or three cases the distinction is indicated by the accent as in certain unaccented syllables, as in *fulfill, goodness;* and in other cases by the subsequence of the sound *r*, as in *girl*. Even these slight differences could be indicated by a scrupulous writer with an abbreviated figure *3* alongside, to the right, and at the upper corner, of the letter.

Having thus made possible the writing of English with unmistakable letters, each letter for a single sound, and each readily distinguished sound by a single letter, a strong reason is advanced in favor of the general adoption of English as a universal language. Indeed, it is ardently to be hoped that eventually some one language may become universal, and known to the whole human race. Latin was formerly so widely known and extensively used among the more civilized nations as to give some color to its claim to become the universal language. But the gradually increased refinement of ideas in modern times has apparently made it impossible to be satisfied with so bald and rude a method of communication. The numerous artificial languages proposed for this purpose, even if not

liable to the same objection, or to greater crudity, are yet additional languages to be learned. English already known to a much larger number of men than any other language, seems to be, by all odds, the best adapted to become, perhaps with slight modifications, a universal language. The simplicity of its grammar, aside from orthography, makes it remarkably easy for foreigners to learn; and, for use in universal form, the comparatively few irregularities of grammar might considerately be eliminated, so that (in universal form) it might be allowed to say mouses, instead of mice, and digged instead of dug. English has already shown its capacity to express perfectly the finest distinctions of ideas and must in that respect far excel any artificial language, like Esperanto, or Volapuek, with their rude, bald, lack, for example, of the definite or indefinite articles. A rational, phonetic, practical spelling would, then, make English ideally perfect for a universal language. Clearly, for that purpose, the usage of speakers of some region, or of some degree of cultivation, with some degree of emphasis, must be selected as the norm to which the written language should conform, in order to make the writing and spelling in the main, though not always in every minute detail, phonetic. Well taught children should, then, everywhere learn to pronounce the words as they are spelled, and not be allowed to drop the sound of *r* in arm, or pervert the sound of the English long *u* (like *yu*, except after the sound of *ch, j, r, sh, zh,* or *y*). Normal schools should train teachers in these details so that the children may be properly drilled. In that way the language would be rightly conserved, and would tend to become fit for universal use.

One serious difficulty in the adoption of any such improvements of our alphabet is that there are so many men who excel more in persuasive eloquence, in "the gift of the gab," than in a thorough knowledge of phonetics and inclination to careful reflection. Cadmus could not have been a ready tongued, shallow utterer of rapidly up-bubbling superficial thoughts. A group, or committee, or society of such quick-witted individuals (perhaps some of them so densely ignorant as to suppose *h* to be a consonant, instead of the whispered, or surd, form of its following vowel, or to insist that the English *ch,* and *j* are compounded of sounds distinguishable even by the ear, and as much unlike the real ones as the bursting open, or banging shut of a tightly swollen door, is to the mild clapping to or open-

ing of a well-fitting closure), may make bold to put forward by their majority vote some alphabetic, or orthographic, system (as the Japanese Roman Letter Society did), and may really delay for a long time the adoption of an altogether rational and practical method. It would be much better for individuals to propose their own plans, and put them into use by themselves and by a portion of the public. Gradually, the best of such plans would take the lead, and come into more and more general use, without having to overcome at the outset the prestige of the dominant approval of a high-sounding society or committee. In any case, it would clearly take many years for such a rational new system fully to supplant the present established usage.

Meantime, it might be advisable to do something towards simplifying the learning of the present established spelling. To be sure, the difficulty of learning it has been much exaggerated, owing to the general extreme neglect of the study. It seems, however, possible that the six weeks or so that appears to be ample for a half-grown boy or girl to learn to spell well might be reduced to a couple of weeks, at most, with a properly arranged booklet; so that the present multitudinous army of typists might readily fit themselves to avoid tormenting their employers by ignorance of so simple an art as spelling.

But however advantageous a simple, purely phonetic spelling might be to a defectively educated typist, or to an adult foreigner, let it not by any means be imagined that the time spent by children in acquiring our more complicated established orthography is uselessly thrown away. On the contrary, it is a highly useful discipline, not only training the memory in a simple way, well adapted to young children, but giving most valuable habits of close and accurate minute observation (the precision that is the most efficient aid to the conservation of language), and enabling the easy understanding and remembering of the proper mode of writing a new word or name. Such habits may also be acquired by certain games of children, but in a way not a whit more interesting or "useful" than the old-fashioned spelling match. The comparatively recent way of teaching to read by the general appearance of the word, and with total neglect of syllabical spelling, is detestable, and produces results that are full of torture and disgust to those who have to listen to such reading.